

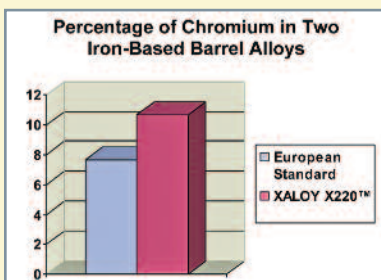
## Corrosion Resistance of New Barrel Inlay Exceeds that of European Standard Alloy

A new bimetallic barrel alloy developed by Nordson XALOY exhibits greater corrosion resistance than comparable general-purpose iron-based inlays currently standard in Europe, providing a longer working life, increased productivity, and enhanced process consistency and product quality. The company will introduce the technology at K 2013.

The X220™ inlay for extrusion and injection molding barrels is an alloy of iron, boron, and chromium, with a chromium content more than that of the X200™ alloy already available from Nordson XALOY and 40% greater than a standard alloy widely used in Europe. In acid immersion tests by Nordson XALOY, the new X220 alloy exhibited a 46% improvement over the European standard material in terms of sample weight loss in sulfuric acid, and a 31% improvement with hydrochloric acid.

“The superior corrosion resistances of Nordson XALOY’s X220 alloy enhances throughput and reduces downtime for extrusion processors and enables molders to achieve consistent, on-specification production,” says David Hotchkiss, global product manager. “As a new entry in the world’s broadest range of single- and twin-barrel products, it extends our ability to meet the full spectrum of processor needs.”

Nordson XALOY is the only screw and barrel manufacturer with a global footprint and can meet demand anywhere in the world. Visit Nordson XALOY at K (Hall 11, Stand A26) and online at [www.nordsonxaloy.com](http://www.nordsonxaloy.com). ♦



## Nordson Builds Global Resource Focusing on Melt Stream Technologies



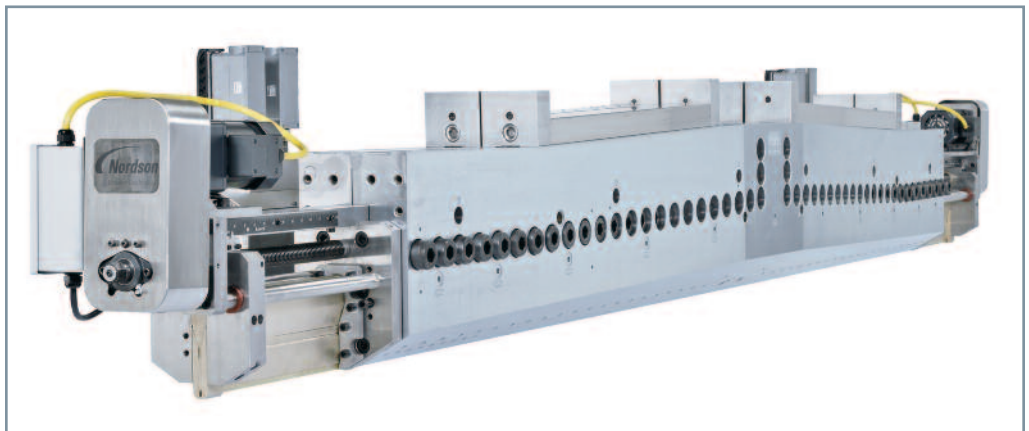
K 2013 will mark the debut of Nordson Corporation’s Polymer Processing Systems group, a new worldwide offering of products providing customers with a uniquely broad range of technologies for melting, conditioning, dispensing, and giving shape to plastics. Following a series of strategic acquisitions since the last K show, Nordson now manufactures precision melt stream components starting with the screws and barrels for extrusion and injection molding and proceeding downstream to the dies used to produce film, sheet, coatings, and pellets. In between are a diversity of critical components such as filtration systems, pumps, and valves.

“All of the organizations that Nordson has acquired to form its Polymer Processing Systems group are leading suppliers of melt processing components that excel in precision engineering and place high value on meeting customers’ manufacturing needs and supporting them long after the sale,” says Peter Lambert, senior vice president of Nordson Corporation. “We expect our customers to benefit not only from the wide range of product offerings available, but also from Nordson Corporation’s global manufacturing capabilities and localized service. Our strategy is to bring together complementary companies to optimize polymer processing efficiency and quality.”

Starting with the most recent acquisition, the product lines that comprise Nordson Polymer Processing Systems are:

- **Kreyenborg GmbH**, based in Münster, Germany. This organization manufactures melt filtration systems, gear pumps, and melt valves for extrusion, recycling and polymerization. Jan Hendrik Ostgathe is the Managing Director (At K 2013: Hall 9, Stand A44)
- **BKG Bruckmann & Kreyenborg Granulierteknik GmbH** based in Münster, Germany. This organization produces underwater pelletizing systems, centrifugal dryers, and die plates for extrusion, recycling, and polymerization. Ralf Simon is the Managing Director. (At K 2013: Hall 9, Stand A48)
- **Nordson XALOY**, based in New Castle, PA, U.S.A., manufactures components and melt delivery systems for injection molding and extrusion machinery, including barrels, high performance screws, pre-assembled plasticating systems, heat transfer rolls, and cleaning ovens; it also produces pelletizing systems. Steve Purcell is Vice President and General Manager. (At K 2013: Hall 11, Stand A26)

*Continued on P. 2.*



**MORE VERSATILITY FOR CAST FILM.** New-generation *Contour™* die from Nordson **EXTRUSION DIES INDUSTRIES** combines fast, precise gauge adjustment, and rapid width changes, providing increased productivity and savings. Photo shows its unique ‘sculpted’ shape. See article on p. 2.

## Enhanced Water Filtration System Cuts Power Use in Underwater Pelletizing

An innovative water filtration design for BKG's underwater pelletizers uses substantially less energy than the company's previously introduced systems and prevents the release of heat to the workplace.

Called Optigon™, the new system is rated at using only 1,440 kW per year (measured at 8,000 hours), compared with 44,000 kW and 98,480 kW for the company's Optiline™ and Polyline™ systems, respectively.

In designing the new Optigon system, BKG eliminated the curved screen pump used in the Optiline and improved the filtration.

Optionally, all of BKG's water systems can be designed with insulation to conserve energy and prevent its release to the environment. The insulation also serves as touch-protection for workers.

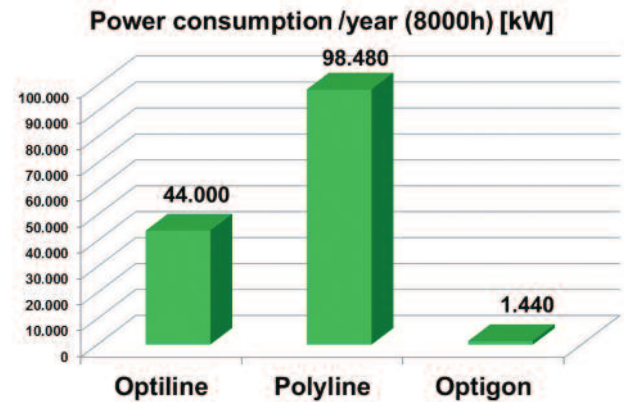
Die plate rims are provided with thermal insulation, which ensures a uniform temperature profile in the flow channels and retention of heat in the die plate. The energy saving potential in comparison with conventional die plates is about 30%.

Motors used in the company's pelletizing systems already achieve the IE2 classification for energy efficiency (a ranking of "High Efficiency"). BKG intends to increase energy efficiency to the IE3 classification ("Premium Efficiency") in the near future.

These improvements are part of BKG's program of continuous improvement in

regard to environmental impact and energy efficiency.

Visit BKG at K (Hall 9, Stand A48) and online at [www.bkg.de](http://www.bkg.de). ♦



## Fundamentally New Injection Heating System Increases Process Control and Saves Energy

At K 2013, Nordson XALOY will introduce the first completely "cool-to-the-touch" heating system for injection barrels and melt pipes, one that delivers heat more uniformly and reaches start-up targets more rapidly than band heaters, while substantially reducing energy consumption.

Called SmartHeat™, the new barrel coating consists of two layers of plasma-sprayed metallized ceramic with a nichrome wire wrap sandwiched in between, plus a thermal insulation cover. Because the heat from the wires is conducted throughout the ceramic material, the system raises the temperature of the barrel to target levels more quickly than with band heaters, maintains it more uniformly, and uses less energy. The tightly strapped thermal insulation wrap over the ceramic coating virtually eliminates heat losses to the workplace, saving on air conditioning costs and reducing the risk of operator injury.

Another safety benefit of the new system is the elimination of the fire hazard from having numerous exposed wires connected to multiple heater bands. Instead, all SmartHeat wiring is run underneath the thermal insulation.

The speed and uniformity of heating with the SmartHeat system appears in a side-by-side comparison with an injection press using conventional band heating, showing the effects on

four zones. While the SmartHeat system brings the zones to the same target temperature within 15 minutes and then maintains all four at exactly that level, the start-up with the band heaters takes 23 minutes, and there continue to be wide temperature variations in each zone thereafter.

Overall, the SmartHeat barrel coating is 30 to 60% more efficient than band heaters, according to David Hotchkiss, global product manager.

"The consistent, reliable performance of SmartHeat barrel coating enhances process control, increasing output of on-specification product and reducing scrap," says Mr. Hotchkiss. "The system is designed to last the life of the barrel and eliminates the maintenance tasks associated with heater bands."

The SmartHeat system can be used for process temperatures up to 750 °F (400 °C). It is available with new barrels or can be readily retrofitted.

Visit Nordson XALOY at K (Hall 11, Stand A26) and online at [www.nordsonxaloy.com](http://www.nordsonxaloy.com). ♦

**COOL-TO-THE-TOUCH** SmartHeat™ system is shown installed on an injection barrel. Green thermal insulation is strapped over heating component, which consists of two layers of plasma-sprayed metallized ceramic with a nichrome wire wrap sandwiched in between.

